

IN THE CLAIMS

The following claims are now pending in the present application:

1. (Currently Amended) A power generation apparatus comprising:
a fuel cell including an anode; and
a reforming module, wherein the reforming module is adapted to reform hydrocarbon fuel into hydrogen and other components, and to separate said hydrogen from said other components, the apparatus being arranged so that said hydrogen is fed from the reforming module to the anode of the fuel cell;
a recycling arrangement to recycle hydrogen in the outflow stream of the anode of the fuel cell back to the anode; and
a controlling arrangement to control the amount of hydrogen recycled and to tap off hydrogen that is not recycled.

2-31. (Cancelled)

32. (New) The apparatus as claimed in claim 1, wherein the apparatus is arranged such that substantially nothing except hydrogen is fed to the fuel cell.

33. (New) The apparatus as claimed in claim 1, comprising a removal arrangement to remove water from the outflow stream of the anode of the fuel cell.

34. (New) The apparatus as claimed in claim 1, wherein the reforming module is further adapted to separate carbon dioxide and to output a stream of said carbon dioxide.

35. (New) The apparatus as claimed in claim 1, wherein the reforming module is further adapted to absorb carbon dioxide or sequestering it into a solid.

36. (New) The apparatus as claimed in claim 1, wherein the reforming module comprises means for absorbing the carbon dioxide by a carbonation reaction with a metal oxide or hydroxide to produce a metal carbonate.

37. (New) The apparatus as claimed in claim 1, which also comprises a desorption module adapted to allow the release of carbon dioxide.

38. (New) The apparatus as claimed in claim 1, wherein the reforming module is thermally integrated with the fuel cell.

39. (New) The apparatus as claimed in claim 37, wherein the desorption module is thermally integrated with the fuel cell.

40. (New) A method of generating power and producing hydrogen comprising:
reforming hydrocarbon fuel into hydrogen and other components;

separating said hydrogen from said other components;
feeding said hydrogen to an anode of a fuel cell;
recycling hydrogen in an outflow stream of the anode of the fuel cell back to
the anode;
controlling the amount of hydrogen recycled; and
tapping off hydrogen that is not recycled.